

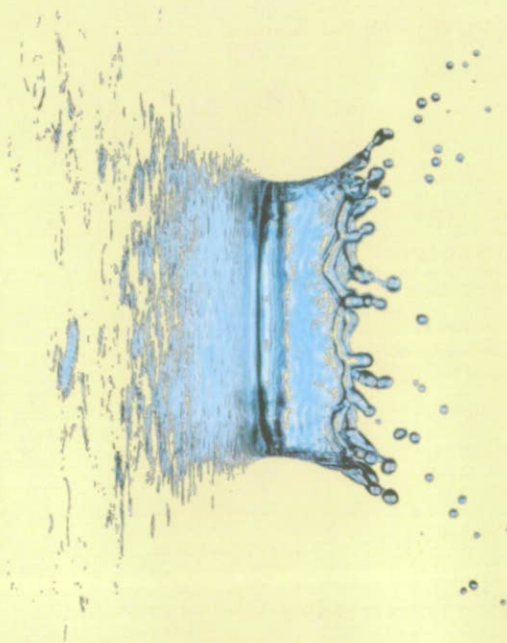
Este informe contiene información muy importante sobre su agua beber.  
Tradúzcalo o hable con alguien que lo entienda bien.

This report contains important information about your drinking water.

Translate it or speak with someone who understands it.



**City of Sioux Falls**  
S O U T H D A K O T A



*Reporting Year 2016*

# WATER QUALITY REPORT



Water Purification Plant  
2100 North Minnesota Avenue  
P.O. Box 7402  
Sioux Falls, SD 57117-7402

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## Drinking Water and Your Health

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration establishes limits for contaminants in bottled water. Levels of regulated substances are enforced through Maximum Contaminant Levels (MCLs).

- **Primary Drinking Water Standards**  
set limits for substances in water that may be harmful to humans if consumed in excess. They include MCLs for contaminants that affect health, monitoring and reporting requirements, and water treatment requirements.
- **Secondary Drinking Water Standards**  
deal with aesthetic qualities, such as taste and odor, which relate to consumer acceptance rather than health factors.

According to the EPA, drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPAs Safe Drinking Water Hotline at (800) 426-4791.

## What If I Have Special Health Needs?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control guidelines for appropriate means to lessen the

the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

## Protecting Water at the Source

The City utilizes the Big Sioux River, the Big Sioux Aquifer, and the Middle Skunk Creek Aquifer to provide water for its residents. In late 2003, the South Dakota Department of Environment and Natural Resources (SDDENR) completed a Source Water Assessment to determine the potential for contamination in and around these sources. The 1996 Amendments to the Safe Drinking Water Act required the SDDENR to complete a report of this type for each public water supply in the state. Based on the findings of this report, the sources that Sioux Falls utilizes for its drinking water are moderately susceptible to contamination. The City continually monitors its source waters for contamination and has a long history of providing safe drinking water to our customers. You may view a copy of the report at the office of the SDDENR in Pierre.

## Questions?

If you have any questions about your water, please contact us for answers:

**Water Quality Concerns..... 373-6950**  
**Lawn Watering Concerns..... 373-6971**  
**Billing Questions ..... 367-8131**  
**Water Turn On/Off..... 367-8131**  
**General Questions ..... 373-6940**  
**Water Conservation/  
Plumbing Retrofit Program ..... 373-6971**

For additional information please visit our website: **[www.siouxfalls.org/water](http://www.siouxfalls.org/water)**

## Sioux Falls Tests Your Drinking Water to Keep It Safe

The Sioux Falls Public Works Water Division proactively and routinely tests drinking water for both regulated and unregulated substances to ensure the water coming out of your tap each day is of highest quality. This year's water quality report again shows that the drinking water in Sioux Falls far exceeds quality and safety standards.

Perfluorooctane sulfonate (PFOS) and perfluooctanoic acid (PFOA) are two chemicals from a group of compounds called perfluoroalkyl substances (PFASs). In May 2016, the Environmental Protection Agency (EPA) set health advisory levels for these two chemicals at a combined level of 70 parts per trillion. While there are no state or federal regulations for PFASs in drinking water, several cities across the United States have recently detected PFASs in their drinking water.

The City of Sioux Falls has tested its drinking water for several of these compounds. In July 2016, PFOS plus three additional PFASs were detected in the treated drinking water. The highest level detected was 5.8 parts per trillion, far less than the new health advisory level. Additional monthly testing has shown our water to be free of any of these substances.

The City continues to work with the state Department of Environment and Natural Resources to further understand the new health advisory. The City has temporarily discontinued the use of any well where PFASs have been detected. Additionally, testing has been done on each currently operating well to ensure PFASs are not present.

Because PFASs repel oil, grease, and water, they are often found in consumer products such as non-stick cookware, food packaging such as microwave popcorn bags, fabric coating, consumer goods such as eye make-up, and Class B firefighting foam.

Additional information and answers to a number of questions about PFASs are available at [www.siouxfalls.org/water](http://www.siouxfalls.org/water).

## Comprehensive Water Quality Monitoring

Sioux Falls receives its drinking water from the Big Sioux River (surface water), the Big Sioux Aquifer, the Middle Skunk Creek Aquifer (ground water), and treated water from the Lewis and Clark Regional Water System. All drinking water sources (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. All of these sources contain some naturally occurring substances. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. It can also pick up substances resulting from the presence of people and animals. Water from the river, wells, treatment plant, and taps throughout Sioux Falls is tested regularly to screen for these substances so steps can be taken before harmful levels occur. Samples are tested at the water plant lab, the City and State health lab, and several contract labs specializing in drinking water analysis. Substances that may be present are divided into five basic testing groups and include:

- **Microbial contaminants** (such as viruses and bacteria) may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants** (such as salts and metals) may occur naturally or result from urban storm water runoff, sewage treatment plant discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides** may come from urban storm water runoff, residential uses, and agriculture.
- **Organic chemical contaminants** (including synthetic and volatile organic chemicals) may be by-products of industrial and petroleum production, urban storm water runoff, gas stations, and septic systems.
- **Radioactive contaminants** may be naturally occurring or the result of oil and gas production and mining activities.

The City of Sioux Falls tests for more than 100 regulated and many other nonregulated contaminants in the drinking water, but only those regulated contaminants that are detected are listed on this report.



# CITY OF SIOUX FALLS

## 2016 WATER QUALITY DATA

INORGANIC CHEMICALS					
PARAMETER (UNIT)	MCLG	MCL	LEVEL FOUND	RANGE	POSSIBLE SOURCE OF SUBSTANCE
Antimony (PPB)	6	6	1		Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Barium (PPM)	2	2	0.024		Erosion of natural deposits
Chromium (PPB)	100	100	1		Erosion of natural deposits
Fluoride (PPM)	4	4	0.74	0.35–0.74	Additive to promote strong teeth
Nitrate (PPM)	10	10	1.31		Runoff from fertilizer, leaching from septic tanks, sewage, naturally present in the environment
Selenium (PPB)	50	50	1		Petroleum and metal refineries, natural deposits

LEAD AND COPPER (SAMPLES COLLECTED IN 2016)					
PARAMETER (UNIT)	MCLG	ACTION LEVEL	90% OF VALUES LESS THAN	NO. OF SITES ABOVE AL	POSSIBLE SOURCE OF SUBSTANCE
Lead (PPB)	0	15	3.0	0 out of 50	Corrosion of household plumbing systems
Copper (PPM)	1.3	1.3	0.097	0 out of 50	Corrosion of household plumbing systems

DISINFECTANTS/DISINFECTION BY-PRODUCTS					
PARAMETER (UNIT)	MRDLG	MCL	LEVEL FOUND	RANGE	POSSIBLE SOURCE OF SUBSTANCE
Total Chlorine (PPM)	4	4.0	3.4	0.2–3.4	Water additive used to control microbes
TTHMs (Total Trihalomethanes) (PPB)	NA	80	37.2	24–63	By-product of drinking water chlorination
HAA (Haloacetic Acids) (PPB)	NA	60	15.4	6.9–26	By-product of drinking water chlorination

MICROBIOLOGICAL				
PARAMETER (UNIT)	MCLG	MCL	MAXIMUM LEVEL FOUND	POSSIBLE SOURCE OF SUBSTANCE
Total Coliform Bacteria (present/absence)	Present in no samples	5% or more of samples per month are positive	Present in 0.8% of samples in one month	Naturally present in the environment
Turbidity (NTU)	NA	Determined by treatment technology	100% of samples were within limits Highest = 0.09	Soil runoff

ORGANIC CARBON					
PARAMETER (UNIT)	MCLG	MCL	REMOVAL RATIO	RANGE	POSSIBLE SOURCE OF SUBSTANCE
Total Organic Carbon	NA	TT	2.08	1.0–2.67	Naturally present in the environment

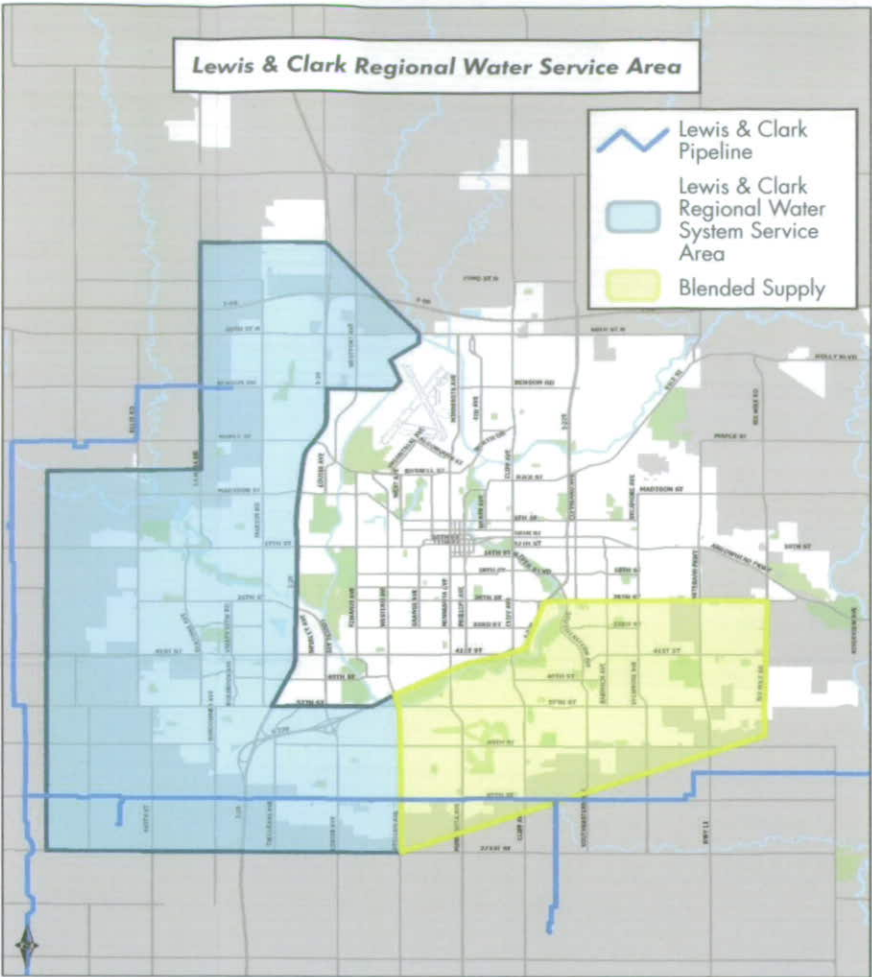
RADIOLOGICAL					
PARAMETER (UNIT)	MCLG	MCL	LEVEL FOUND	YEAR SAMPLED	POSSIBLE SOURCE OF SUBSTANCE
Beta/Photon Emitters (pCi/L)	0	50	4.8	2015	Decay of natural and man-made deposits

UNREGULATED CHEMICALS					
PARAMETER (UNIT)	MCLG	MCL	LEVEL FOUND	YEAR SAMPLED	POSSIBLE SOURCE OF SUBSTANCE
Chloroform (PPB)	Unregulated		6.3	2015	By-product of drinking water chlorination
Bromadichloromethane (PPB)	Unregulated		8.2	2015	By-product of drinking water chlorination
Dibromochloromethane (PPB)	Unregulated		7.7	2015	By-product of drinking water chlorination
Bromoform (PPB)	Unregulated		1.3	2015	By-product of drinking water chlorination

LEWIS & CLARK REGIONAL WATER SYSTEM WATER QUALITY DATA					
PARAMETER (UNIT)	MCLG	MCL	LEVEL FOUND	RANGE	POSSIBLE SOURCE OF SUBSTANCE
Fluoride (PPM)	4	4	1.11	0.68–1.11	Additive to promote strong teeth
Nitrate (PPM)	10	10	0.6		Runoff from fertilizer, leaching from septic tanks, sewage, naturally present in the environment

Additional water quality data from the City of Sioux Falls and the Lewis & Clark system may be found on the City’s website at [www.siouxfalls.org/water](http://www.siouxfalls.org/water)

No health-based drinking water quality violations were recorded in 2016.



### Finding Your Water Quality

This water quality report provides information for all water customers whose drinking water is provided by the Sioux Falls Water Division. Our water comes from two different sources—the water plant owned and operated by the City and water purchased from the Lewis and Clark Regional Water System. You can use the map shown above to determine where your water comes from and what water quality data applies to your drinking water.

### Lead in Drinking Water

Sioux Falls Water Division has been testing for lead and copper in accordance with the EPA’s Lead and Copper Rule since 1992 and has consistently tested below the Action Level established in the rule. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Sioux Falls Water Division is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. **When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. You may call the Water Quality Concern Line at 373-6950 to request a lead-in-water sampling kit.** In addition, information on lead in drinking water, testing methods, and steps you take to minimize exposure is available from the Safe Drinking Water Hotline: (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

### Our Results

Providing an average of 20.8 million gallons of water a day for use in homes, schools, hospitals, and businesses that meets all required water quality standards is the accomplishment of our expertly trained lab analysts and state-certified water treatment operators. Our commitment to exceptional water quality is reflected in the number of tests we perform during and after the treatment process. More than 170,000 analyses on more than 250 substances were conducted during 2016 to ensure reliable results and safe drinking water. This number far exceeds the minimum testing requirements. In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Even the highest levels detected were well below the required limits. We listed in this report only the substances that were detected.

### Useful Drinking Water Terms and Definitions:

- AL (Action Level):** The concentration of a substance which, if exceeded, triggers treatment or other requirements that a water system must follow.
- MCLG (Maximum Contaminant Level Goal):** The level of a substance below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- MCL (Maximum Contaminant Level):** The highest amount of a substance allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.
- PPM (Parts Per Million):** Also referred to as milligrams per liter.
- PPB (Parts Per Billion):** Also referred to as micrograms per liter.
- NTU (Nephelometric Turbidity Units):** Cloudiness of the water.
- NA (Not Applicable):** Data not available.
- BDL (Below Detection Level):** The substance could not be found at the minimum amount that can be reliably detected.
- GPG (Grains Per Gallon):** Unit of water hardness.

### Additional Parameters of Interest

PARAMETER (UNITS)	SIOUX FALLS AVERAGE	LEWIS & CLARK AVERAGE
Alkalinity (PPM)	44	64
Calcium Hardness (as CaCO3) (PPM)	116	98
Total Hardness (as CaCO3) (PPM)	238	172
Iron (PPM)	<0.03	<0.03
Manganese (PPM)	<0.05	<0.05
pH (units)	8.6	8.5
Sodium (PPM)	26.1	76
Chloride (PPM)	30	19
Chlorate (PPB)	BDL	120–560
Sulfate (PPM)	200	273
Water softener setting, total hardness (GPG)	14	10